

the sun's limb at once, so that the cusps were connected by a series of luminous points separated from each other, but perfectly referable to the forms of the mountain previously seen."

"Of all the phenomena described by Mr. Baily (*Mem. R. A. S.* vol. x.), I only saw those represented in fig. 1; but to make this agree with my observation, the serrated portion should be diminished one-half.

"The duration of the annulus was $7^m 0^s.4$, which should, perhaps, be increased 2^s or 3^s , on account of the clouds at the first contact. The second contact was estimated to take place at the disappearance of the luminous points. If the second contact be estimated from the formation of these points, then the duration must be shortened about 1^s ."

SOLAR SPOTS.

Extract of a letter from Mr. J. H. Griesbach, to the President.

"I have great pleasure in sending you copies of a series of my drawings of the solar spots, from September 20th, to October 25th, 1843, complete, with the exception of one day; and I shall be happy to copy all the others, if you will let me know how you like them to be done. The telescope I use is a 6-foot Newtonian, the speculum 6 inches diameter. The position of the spots I often determine by receiving the image on a drawing-board: some of the drawings were made only from the view, but I have been careful to represent the changes in the form and nature of the spots, thinking that an extended series of drawings may in the end afford some indication of the nature of their cause. On the 27th of September, 1843, I made hourly drawings of the sun, and between four and five o'clock, three fresh spots broke out, two near the centre of the disc; they were not visible the following day. The changes in the form of the large spot which came into view on the 14th of October, 1843, are particularly interesting."

Mr. Griesbach's drawings were presented to the Society, with a drawing made on September 27, 1843, of *Jupiter, seen without his moons*. This rare phenomenon was also observed at Woodstock, Vermont, U. S.

Extract of a letter from the President, enclosing Mr. Griesbach's Communication.

"Herewith I enclose a letter from Mr. H. Griesbach, explanatory of the drawings of the solar spots, which I lately addressed to you, executed by him, and which, at my request, he has been good enough to copy for communication to the Astronomical Society, as a contribution to the history of the solar spots, and as the *commencement of a collection of such drawings*, which it appears to me highly desirable should be formed, with a view to securing, if possible, an unbroken series of such drawings, exhibiting a continuous view of the changes in the sun's surface for every day in every

year in future, and as near an approach to it in past years as can now be recovered. It seems high time that some attempt of the kind should be made on a systematic and regular plan, as the only probably effectual means of arriving at a knowledge of the laws which govern these mysterious phenomena, and the periods, if any, which they observe in their formation, and thence of elucidating the nature of the sun itself.

“No single observer, at a fixed locality, can, of course, with any amount of diligence, contribute more than a very fragmentary series of such observations; nor, considering the frequency of long-continued runs of cloudy weather extending over immense tracts of country, could even the united observations of all Europe avail to secure such a continuous series as there is a necessity of obtaining. If, however, it were to be made known to observers in every region of the globe, that a permanent establishment, such as the Astronomical Society, interested itself in the formation of such a collection, and had opened a *department in its archives for the reception and arrangement of such contributions from all quarters*, there can be little doubt that many individuals, resident in climates habitually serene, would be induced to make and contribute diurnal representations of the solar disc.

“Should the Astronomical Society think proper to issue any prospectus or notice, calling for such contributions, it would, of course, be desirable that the plan should be cast so as to secure a certain degree of uniformity in their execution, both as respects the hour or hours of the day, *when*, and the scale *on which*, they should be made. If made, for instance, at, or as nearly as possible at, noon, observations made on the same day in Europe, India, Australia, and America, would, in effect, furnish not merely a diurnal but a quarto-diurnal series, adding much to the interest of the whole. Moreover, the exceeding facility with which photographic processes are executed, and especially the short time which the *Talbotype* process occupies, makes their execution on a given scale, and with every requisite degree of precision, easily attainable.

“In the hope that such a collection may be set on foot, it is my intention, so soon as I can find leisure, to execute, and offer to the Society, a series of copies on a uniform scale, corresponding to Mr. Griesbach’s (that is to say, in which the disc of the sun shall be represented by a circle $3\frac{1}{2}$ inches in diameter), of all the drawings I possess of the solar spots.”

Eclipse of the Sun, April 15, 1847.

Capt. P. P. King, R.N. observed the beginning of this eclipse at Tahlee, Port Stephens, New South Wales, at $4^{\text{h}} 36^{\text{m}} 36^{\text{s}}.8$, mean time at the place.

“Magnitude of eclipse (proportion of observed part to whole disk) 0.616 on northern limb.

Latitude, S. $32^{\circ} 40'$

Longitude, E. $10^{\text{h}} 8^{\text{m}} 8^{\text{s}}$

The longitude is computed from this eclipse by the data of the *Nautical Almanac*: Mr. Woolhouse’s method.”